IN THE CLAIMS:

Please add new claims 15-33, and amend the claims as follows:

1. (Original) A method for forming a nucleation layer and a bulk deposition layer on a substrate disposed in a processing chamber, said method comprising:

forming a refractory metal nucleation layer by serially exposing said substrate to first and second reactive gases; and

forming a bulk deposition layer on said nucleation layer by employing vapor deposition to bulk deposit a refractory metal contained in one of said first and second reactive gases.

2. (Original) The method as recited in claim 1 wherein said bulk deposition layer is deposited employing chemical vapor deposition.

3. (Original) The method as recited in claim 1 wherein said bulk deposition layer is deposited employing physical vapor deposition.

4. (Original) The method as recited in claim 1 wherein forming a nucleation layer further includes introducing a purge gas into the processing chamber after exposing said substrate to the first reactive gas and before exposing said substrate to said second reactive gas.

5. (Original) The method as recited in claim 1 wherein forming a nucleation layer further includes purging said processing chamber of said first reactive gas by pumping said processing chamber clear of all gases disposed therein before introducing said second reactive gas.

6. (Original) The method as recited in claim 1 wherein forming the refractory metal nucleation layer further includes purging said processing chamber of said first reactive gas by introducing a purge gas and subsequently pumping said processing

chamber clear of all gases disposed therein before exposing said substrate to said second reactive gas.

7. (Original) The method as recited in claim 1 wherein forming the refractory metal nucleation layer includes forming alternating layers of a boron-containing compound and a refractory metal compound onto said substrate.

8. (Currently Amended) The method as recited in claim 7 wherein the boron-containing compound is diborane [[B_2H_6]] (B_2H_6).

9. (Original) The method as recited in claim 7 further including subjecting said substrate to a purge gas following formation of each of said alternating layers.

10. (Currently Amended) A method for forming a nucleation layer and a bulk deposition layer on a substrate, said method comprising:

serially exposing said substrate to first and second reactive gases, wherein said second reactive gas comprises a refractory metal selected from the group consisting of titanium (Ti) and tungsten (W), while said substrate is disposed in a processing chamber, to form a nucleation layer;

removing from said processing chamber said first reactive gas before exposing said substrate to said second reactive gas;

forming ~~said~~ a bulk deposition layer adjacent to said nucleation layer by chemical vapor deposition while said substrate is disposed in said processing chamber by concurrently exposing said nucleation layer to said second reactive gas and a reducing agent.

11. (Original) The method of claim 10 wherein said reducing agent comprises silane.

12. (Original) The method of claim 11 wherein said refractory metal is tungsten (W).

13. (Original) The method of claim 10 wherein removing from said processing chamber further includes introducing a purge gas into said processing chamber and pumping said processing chamber clear of all gases present therein.

14. (Original) The method as recited in claim 10 wherein said nucleation layer has a thickness in the range of 10 to 100 Å

15. (New) A method for forming a nucleation layer and a bulk deposition layer on a substrate having a plurality of vias, said method comprising:

forming a refractory metal nucleation layer by serially exposing said substrate to first and second reactive gases, wherein the refractory metal nucleation layer covers the plurality of vias; and

forming a bulk deposition layer on said nucleation layer by employing vapor deposition to bulk deposit a refractory metal contained in one of said first and second reactive gases, wherein the bulk deposition layer fills the plurality of vias.

16. (New) The method of claim 15 wherein the refractory metal is tungsten.

17. (New) The method of claim 16 wherein the bulk deposition layer is deposited employing chemical vapor deposition.

18. (New) The method of claim 17 wherein the refractory metal nucleation layer and the bulk deposition layer are deposited in the same chamber.

19. (New) The method of claim 16 wherein the first reactive gas is diborane (B_2H_6).

20. (New) The method of claim 19 wherein the second reactive gas is WF_6.

21. (New) The method of claim 1 wherein serially exposing said substrate to the first and second reactive gases comprises:

exposing said substrate to the first reactive gas for a period of time;

exposing said substrate to a pulse of the second reactive gas; and

exposing said substrate to a pulse of the first reactive gas.

22. (New) The method of claim 21 wherein the period of time is about 5 seconds.

23. (New) The method of claim 21 wherein the first reactive gas is a boron-containing compound and the second reactive gas is a tungsten-containing compound.

24. (New) The method of claim 1 wherein serially exposing said substrate to the first and second reactive gases comprises:

exposing said substrate to a pulse of the first reactive gas;

exposing said substrate to a pulse of the second reactive gas; and

exposing said substrate to the first reactive gas for a period of time.

25. (New) The method of claim 24 wherein the period of time is about 5 seconds.

26. (New) The method of claim 24 wherein the first reactive gas is a boron-containing compound and the second reactive gas is a tungsten-containing compound.

27. (New) The method of claim 1 wherein serially exposing said substrate to the first and second reactive gases comprises:

exposing the substrate to the first reactive gas for a period of time to form a first layer prior to forming the refractory metal nucleation layer.

28. (New) The method of claim 1 wherein serially exposing said substrate to the first and second reactive gases comprises:

a first cycle comprising exposing the substrate to the first reactive gas for a period of time; and

a second cycle comprising sequentially exposing the substrate to the second reactive gas and the first reactive gas.

29. (New) The method of claim 28 wherein the period of time is about 5 seconds.

30. (New) The method of claim 28 wherein the first reactive gas is a boron-containing compound and the second reactive gas is a tungsten-containing compound.

31. (New) The method of claim 1 wherein serially exposing said substrate to the first and second reactive gases comprises:

a first cycle comprising sequentially exposing the substrate to the first reactive gas and the second reactive gas; and

a second cycle comprising exposing the substrate to the first reactive gas for a period of time.

32. (New) The method of claim 31 wherein the period of time is about 5 seconds.

33. (New) The method of claim 31 wherein the first reactive gas is a boron-containing compound and the second reactive gas is a tungsten-containing compound.